

DDDDDDDDDDDD	EEEEEEEEEEEEEE	BBBBBBBBBBBB	UUU	UUU	GGGGGGGGGG
DDDDDDDDDDDD	EEEEEEEEEEEEEE	BBBBBBBBBBBB	UUU	UUU	GGGGGGGGGG
DDDDDDDDDDDD	EEEEEEEEEEEEEE	BBBBBBBBBBBB	UUU	UUU	GGGGGGGGGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDD	DDD	BBB	UUU	UUU	GGG
DDDDDDDDDDDD	EEEEEEEEEEEEEE	BBBBBBBBBBBB	UUUUUUUUUUUUUU	UUUUUUUUUUUUUU	GGGGGGGGGG
DDDDDDDDDDDD	EEEEEEEEEEEEEE	BBBBBBBBBBBB	UUUUUUUUUUUUUU	UUUUUUUUUUUUUU	GGGGGGGGGG
DDDDDDDDDDDD	EEEEEEEEEEEEEE	BBBBBBBBBBBB	UUUUUUUUUUUUUU	UUUUUUUUUUUUUU	GGGGGGGGGG

[illegible]

STRUCDEF -- DECLARATION FILE FOR DATA STRUCTURE DEFINITION
AND ACCESS MACROS USED IN THE VAX DEBUGGER

Version: 'V04-000'

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WRITTEN BY
Bert Beander August, 1981.

MODULE FUNCTION:
This REQUIRE file contains all macros used in defining and accessing
data structures (BLISS BLOCKS) in the VAX Debugger. These symbolic
names should always be used in BLISS Field-References.

DATA STRUCTURE DEFINITION AND ACCESS

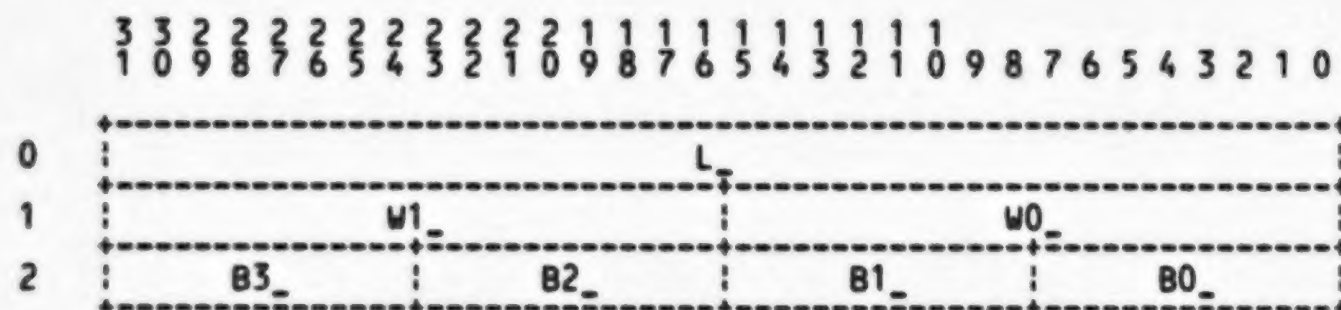
The following macros must be used in defining field names for all data structures in the Debugger. These macros supply the position, size, and sign-extension values when used in FIELD declarations for BLOCK and BLOCKVECTOR data structures. The various generic forms (as specified by the letters in the names) are as follows:

A	Materialized address
L	Longword
W	Zero-extended word
B	Zero-extended byte
V	Zero-extended bit field
SW	Sign-extended word
SB	Sign-extended byte
SV	Sign-extended bit field

The "A" form should be used whenever the field being defined is such that only the address of the field may be materialized in a structure reference; that is, fetch and store operations on the field are not valid. An example of such a field is an ASCII string.

Each of the "V" and "SV" forms take one or two parameters. The first parameter is the bit position within the longword (or byte) and the second is the field size in bits. The second parameter is optional; if omitted, it defaults to 1. Thus V_(5) means bit 5 while V_(5,3) means the 3-bit field starting at bit 5 and ending at bit 7. Bit positions are counted from the low-order (least significant) end of the longword, starting at zero.

The following data structure picture shows the locations of the various fields that can be specified. Note how the bit positions are numbered along the top of the illustration.



MACRO

A_	=	0,	0,	0 %,	! Address of a longword
A0_	=	0,	0,	0 %,	! Address of byte 0
A1_	=	8,	0,	0 %,	! Address of byte 1

```

A2_   = 16, 0, 0 %;      ! Address of byte 2
A3_   = 24, 0, 0 %;      ! Address of byte 3

L_    = 0, 32, 0 %;      ! Longword
W_    = 0, 16, 0 %;      ! Word, zero-extended
B_    = 0, 8, 0 %;       ! Byte, zero-extended

W0_   = 0, 16, 0 %;      ! Word 0 zero-extended
W1_   = 16, 16, 0 %;     ! Word 1 zero-extended

B0_   = 0, 8, 0 %;       ! Byte 0 zero-extended
B1_   = 8, 8, 0 %;       ! Byte 1 zero-extended
B2_   = 16, 8, 0 %;      ! Byte 2 zero-extended
B3_   = 24, 8, 0 %;      ! Byte 3 zero-extended

V_(P,S) = P, %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Unsigned bit field

V0_(P,S) = P, %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Bits in B0_
V1_(P,S) = (P+8), %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Bits in B1_
V2_(P,S) = (P+16), %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Bits in B2_
V3_(P,S) = (P+24), %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Bits in B3_

SW_   = 0, 16, 1 %;      ! Word, sign-extended
SB_   = 0, 8, 1 %;       ! Byte, sign-extended

SW0_  = 0, 16, 1 %;      ! Word 0 sign-extended
SW1_  = 16, 16, 1 %;     ! Word 1 sign-extended

SB0_  = 0, 8, 1 %;       ! Byte 0 sign-extended
SB1_  = 8, 8, 1 %;       ! Byte 1 sign-extended
SB2_  = 16, 8, 1 %;      ! Byte 2 sign-extended
SB3_  = 24, 8, 1 %;      ! Byte 3 sign-extended

SV_(P,S) = P, %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Signed bit field

SV0_(P,S) = P, %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Bits in B0_
SV1_(P,S) = (P+8), %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Bits in B1_
SV2_(P,S) = (P+16), %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Bits in B2_
SV3_(P,S) = (P+24), %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Bits in B3_

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! END OF STRUCDEF.REQ

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VAX/VMS V4.0

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